

AMSAT News Service Weekly Bulletins

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AMSAT NEWS SERVICE

ANS-299

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on <http://www.amsat.org> publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
[ans-editor\(a\)amsat.org](mailto:ans-editor(a)amsat.org)

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
<http://www.amsat.org/mailman/listinfo/ans>

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SB SAT @ AMSAT \$ANS-299.01

ANS-299 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 299.01

>From AMSAT HQ KENSINGTON, MD.

DATE 2020 October 25

To All RADIO AMATEURS

BID: \$ANS-299.01

AMSAT Virtual Symposium Replay Available on YouTube

The 2020 AMSAT Space Symposium and Annual General Meeting was held via a Zoom Webinar on October 17, 2020 with over 200 AMSAT members in attendance. If you were not able to attend, a complete replay is available on the AMSAT YouTube channel: https://youtu.be/EHDgrI_w8hY

The YouTube video is divided into chapters to make it easy to find the specific presentation you are looking for:

0:00:00 Welcome

0:02:07 AMSAT GOLF-TEE System Overview and Development Status

0:43:02 GOLF IHU Coordination

1:19:10 GOLF Downlink Coordination

1:50:15 FUNcube Next
2:13:50 LunART - Luna Amateur Radio Transponder
2:45:35 CatSat HF Experiment Overview
3:13:30 Neutron-1 CubeSat
3:39:58 Progress and Development of Open Source Electric Propulsion
for Nanosats and Picosats
4:15:00 AMSAT Education
5:14:00 ARISS (Amateur Radio on the International Space Station) /
AREx (Amateur Radio Exploration)
6:14:00 AMSAT Engineering
7:21:16 AMSAT Annual General Meeting

AMSAT members may download the 2020 Symposium Proceedings at
<https://launch.amsat.org/Proceedings>.

The 2021 AMSAT Space Symposium and Annual General Meeting is expected
to be held in the Minneapolis area in October 2021.

[ANS thanks the 2020 AMSAT Symposium Team for the above information]

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Due to the COVID-19 pandemic, the AMSAT office
is closed until further notice. For details, please visit
<https://www.amsat.org/amsat-office-closed-until-further-notice/>

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AMSAT Board of Directors Elects Robert Bankston, KE4AL, President

At its annual meeting, the AMSAT Board of Directors elected Robert Bankston, KE4AL, of Dothan, AL, President, succeeding Clayton Coleman, W5PFG. Bankston is a Life Member of AMSAT and has previously served as Treasurer and Vice-President User Services, as well as volunteering in several other capacities for AMSAT, including the development and launch of AMSAT's online member portal and chairing the 2018 AMSAT Space Symposium held at the U.S. Space and Rocket Center, in Huntsville, Alabama. He also is an ARRL Life Member and holds an Extra Class license.

Immediate Past President Clayton Coleman, W5PFG, said "It has been both a joy and privilege to serve as President of AMSAT in 2020. In what has been a rather difficult year for many individuals in amateur radio, AMSAT, through its many supportive members, volunteers, and donors, has continued course on our vision of Keeping Amateur Radio in Space. With our initiatives such as modernizing the AMSAT office with a self-service member portal and the Linear Transponder Module, the organization has moved forward. With the talented and capable individuals sitting on AMSAT's new Board and its Officers, I am confident in a bright future ahead for AMSAT and the amateur radio satellite service."

Other officers elected by the Board were:

- Paul Stoetzer, N8HM, of Washington, DC, as Executive Vice President
- Jerry Buxton, N0JY, of Granbury, TX, as Vice-President - Engineering
- Drew Glasbrenner, K04MA, of Brooksville, FL, as Vice President - Operations
- Jeff Davis, KE9V, of Muncie, IN, as Secretary
- Steve Belter, N9IP, of West Lafayette, IN, as Treasurer
- Martha Saragovitz, of Silver Spring, MD, as Manager
- Alan Johnston, KU2Y, of Philadelphia, PA, as Vice President - Educational Relations
- Frank Karnauskas, N1UW, of Burnsville, MN, as Vice President -

Development

[ANS thanks the AMSAT Board of Directors for the above information]

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Need new satellite antennas? Purchase Arrows, Alaskan Arrows,
and M2 LEO-Packs from the AMSAT Store. When you purchase through
AMSAT, a portion of the proceeds goes towards
Keeping Amateur Radio in Space.
<https://amsat.org/product-category/hardware/>

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Satellite Acronyms Wiki Established

As with any specialized or technical endeavor, the language of amateur satellites is filled with terms, abbreviations, shorthands, and acronyms that become second nature to those who use them daily, but can be obscure to newcomers -- or even to old hands who begin to explore new aspects of satellite construction or operation. This became abundantly clear during the recent AMSAT Symposium, in which some of our hobby's top experts presented projects to the general membership.

In response to inquiries from Symposium participants, John Brier, KG4AKV, and Brad Brooks, WF7T, have initiated a wiki page for listing, and briefly explaining, the technical jargon of our field. When confused by an unfamiliar batch of "alphabet soup," consult the wiki at: <http://sats.wikidot.com/acronyms>

[ANS thanks John Brier, KG4AKV, for the above information]

New Satellite Distance Records Claimed

Casey Tucker, KI7UNJ, and Jérôme LeCuyer, F4DXV, have set a new record via RS-44. They completed an 8,402 km QSO between DN32 in Idaho and JN15 in France on October 19th at 07:15 UTC. This exceeds the prior record of 8,357 km set by W5CBF and DL4EA in late May.

F4DXV also set another record during his trip to JN15. Shortly after setting the record on RS-44, Jérôme worked Michael Styne, K2MTS, in FN22 via A0-27. This QSO covered a distance of 5,904 km, eclipsing the prior record of 5,682 km set by E21EJC and R9LR on June 9th.

In addition to these two new records, McKinley Henson, KE4AZZ, claimed the record for the N0-84 digipeater for a 3,439 km QSO with Christy Hunter, KB6LTY, on April 22, 2019.

For more distance records, see the AMSAT Satellite Distance Records page at <https://www.amsat.org/satellite-distance-records/>

[ANS thanks Paul Stoetzer, N8HM, AMSAT Executive Vice President, for the above information]

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Want to fly the colors on your own grid expedition?
Get your AMSAT car flag and other neat stuff
from our Zazzle store!
25% of the purchase price of each product goes
towards Keeping Amateur Radio in Space
https://www.zazzle.com/amsat_gear

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Support AMSAT's projects today at <https://www.amsat.org/donate/>

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Upcoming Satellite Operations

Upcoming Roves:

DL88: The K5Z DL88 expeditions is heading out!!!! @Ad0dx and @N6ua are heading out on 10/25. Weather looks great, and there is even a chance at some passes on the 26th. This is a daytime activation only because the Talley campground is closed currently. Head on over to QRZ.com and check out the K5Z page for all the details. Or, visit:
<https://www.amsat.org/satellite-info/upcoming-satellite-operations/>

Quick Hits:

KH67,: 7Q7RU, A0-7, RS-44, Q0-100, 11/11 thru 11/21.

FN01: @K8BL will run over to PA tomorrow and I'll have a chance to activate the EN91/FN01 Line. Not sure of the timing, but I'll pop up on a few FM & Linear SATs. All Qs will be on LoTW a day or so afterward.

KP44: OH8FKS is in KP44 until Sunday 10/25.

Please submit any additions or corrections to Ke0pbr (at) gmail.com

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

Rick Tejera K7TEJ from the Thunderbird Amateur Radio Club (TBARC) will be giving a presentation and demonstration of Satellite operations to the Northwest Christian School in Glendale, AZ on Nov. 11th 2020. The demo will be on 50-50 at 2323UT. I will be using our Club call WB7TBC and the church is in Grid DM33wp. I may try to get a student on the air. Please keep an ear out for us and respond to our call, the kids will appreciate it. I'll send out a reminder as the date gets closer.

Clint Bradford K6LCS has booked his "Work the FM Voice Satellites With Minimal Equipment" presentation for the clubs:

10/27/2020 – Cherryland ARC / Traverse Bay ARC

TBD – Antelope Valley (CA) ARC

TBD – A private presentation for a Boy Scout troop in Danville, Penn. These will be Zoom presentations. Everyone is asked to update their copies of the Zoom application – by directly visiting Zoom.us.

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information]

Satellite Shorts From All Over

+ After 196 days living and working in Earth's orbit aboard the International Space Station, NASA astronaut Chris Cassidy, KF5KDR, returned from his third space mission Wednesday, Oct. 21, with cosmo-

nauts Ivan Vagner and Anatoly Ivanishin of the Russian space agency Roscosmos. Cassidy formally turned the station over to cosmonaut Sergey Ryzhikov on Tuesday, handing him a ceremonial "key" to the lab complex. Ryzhikov, Sergei Kud-Sverchkov and Kate Rubins, KG5FYJ, arrived at the station last Wednesday aboard their own Soyuz ship. (ANS thanks Spaceflight Now for the above information)

- + NASA's Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (OSIRIS-REx) spacecraft unfurled its robotic arm Tuesday, Oct. 20, and in a first for the agency, briefly touched an asteroid to collect dust and pebbles from the surface for delivery to Earth in 2023. This well-preserved, ancient asteroid, known as Bennu, is currently more than 200 million miles from Earth. Bennu offers scientists a window into the early solar system as it was first taking shape billions of years ago and flinging ingredients that could have helped seed life on Earth. If Tuesday's sample collection event, known as "Touch-And-Go" (TAG), provided enough of a sample, mission teams will command the spacecraft to begin stowing the precious primordial cargo to begin its journey back to Earth in March 2021. Otherwise, they will prepare for another attempt in January. (ANS thanks www.asteroidmission.org for the above information)
- + China is building a new rocket to fly its astronauts to the moon. Announced at the 2020 China Space Conference last month, the vehicle could deliver 25 metric tons into a trans-lunar injection. The rocket consists of three, 5-meter (16.4') boosters and is 87 meters (285') tall. Liftoff mass will be ~2,200 metric tons, which is about three times that of the Long March 5 (the current heavy lifter in China's rocket lineup). (ANS thanks The Orbital Index for the above information)
- + Most of the aerospace world watched the skies over Antarctica and New Zealand for portions of Thursday night/Friday morning. Earlier this week, LeoLabs Inc, a company that tracks objects in Low Earth Orbit, issued a statement regarding two large objects which posed a "high risk" of collision at 00:56:40 UTC on 16 October 2020. Roughly one hour after the time of possible collision, LeoLabs confirmed "No indication of collision" via a statement on Twitter. The two objects held a greater than 10% chance of colliding 991 km above Antarctica. (ANS thanks nasaspaceflight.com for the above information)
- + The website, Hackaday recently featured an article about David Prutchi, Ph.D., N2QG, and his home station that is capable of copying telemetry from deep-space satellites. Read the article at: <https://bit.ly/2HqZMSb> or read David's paper directly at: <https://bit.ly/2FRSXs9> (ANS thanks hackaday.com for the above information)
- + The University of Western Australia (UWA) is set to install an optical communications station capable of receiving high-speed data transmissions from space. The communications station will be able to receive data from spacecraft from anywhere between low-Earth orbit to as far away as the surface of the moon - about 384,000km away. Dr. Sascha Schediwy, Astrophotonics Group leader at UWA and the International Centre for Radio Astronomy (ICRAR), said optical communications are an emerging alternative to radio waves and are expected to drastically improve data transfer capabilities from space. (ANS thanks AMSAT-UK and IT News of Australia for the above information)
- + Nokia says it has been tapped by NASA to build the first cellular communications network on the moon. The Finnish telecommunications equipment maker said Monday, Oct. 19, that its Nokia Bell Labs division will build a 4G communications system to be deployed on a lunar lander to the moon's surface in late 2022. Nokia's network will pro-

vide critical communications capabilities for tasks astronauts will need to carry out, like remote control of lunar rovers, real-time navigation and high-definition video streaming, the company said.
(ANS thanks apnews.com for the above information)

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73 and Remember to help keep amateur radio in space,
This week's ANS Editor, Mark D. Johns, K0JM

k0jm at amsat dot org